

## **REMARKS**

The Office Action dated October 16, 2003, has been carefully considered. In response thereto, the present application has been amended in a manner which is believed to place it into condition for allowance. Accordingly, reconsideration and withdrawal of the outstanding Office Action and issuance of a Notice of Allowance are respectfully solicited.

The Applicants further submit that claim 1 as amended, and claims 2 and 5-11 dependent upon amended claim 1, claim subject matter which is would not have been obvious over *Belk* in view of *Berthold et al.*

In the Office Action, it is acknowledged that *Belk* does not teach a first or second ferrule or a sleeve. Instead, the Office Action relies on *Berthold et al* for those teachings. However, the Applicants respectfully submit that the combination of references proposed in the Office Action would nonetheless not have resulted in the present claimed invention.

The purpose of the cylinder and reflective fibers in *Berthold et al* is to create a point sensor that relies on a measured change in the resonant wavelength of the resonant cavity to determine an equivalent physical change in length of the cavity itself. By contrast, according to the present claimed invention, it is the sensor fiber that has an optical path length which varies in accordance with the change in displacement. In other words, a distributed sensor rather than a point sensor is implemented. The purpose of the adjusted gap between the ferrules as recited in the present claimed invention is to provide the optimal light signal to the instrument by scattering away sufficient light to cause the optical intensity from all reflective elements in the paths to be equal at the detector within the analyser. This condition is optimal because the largest interferometric peak will result.

As a consequence, whether or not *Berthold et al* can be said to teach or suggest ferrules or a sleeve, the combination of *Belk* with *Berthold et al* proposed in the Office Action would not have resulted in the present claimed invention, with the recitations of the reflectivities of the partially reflective surfaces and of the gap adjusted between 25-200 microns to provide an optimal light signal to the instrument. Therefore, the Applicants respectfully submit that the present claimed invention would not have been obvious over the combination of references applied in the Office Action.

Claims 7-9 depart further from the applied prior art. In the sensor defined by those claims, the connector connects the second end of the lead fiber to the first end of each of the plurality of the sensor fibers in parallel. By contrast, *Belk* teaches a fiber optic sensor having serially multiplexed optical cavities of different lengths that form a number of sensors. The different lengths are to permit demodulation and separation of the signals from the different fiber segments that make up the sensor.

According to claim 9, the plurality of the sensor fibers have different optical path lengths to effectively spatially divide the measuring range of the analyzer. However, multiplexed sensors, of equal length, could be demodulated by passively coupling multiple reference paths within the analyzer; thus, claims 7 and 8 are enabled.

For the reasons set forth above, the Applicants respectfully submit that even if the rejection of claim 1 is maintained, claims 7-9 should still be found to be patentable over the combination of references applied in the Office Action.

Thus, the Applicants respectfully submit that the outstanding ground of rejection under 35 U.S.C. § 103(a) has been overcome by the present Amendment.

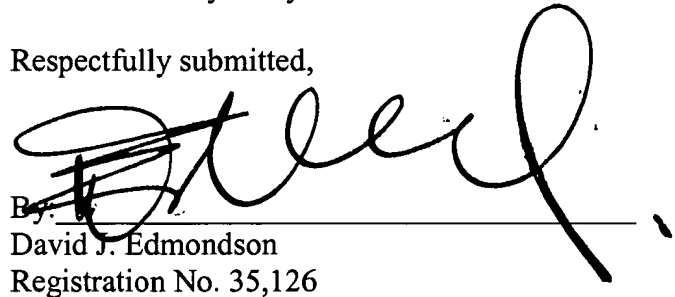
Finally, the Applicants respectfully request that the Information Disclosure Statement filed August 25, 2003, be considered and acknowledged.

For the reasons set forth above, the Applicants respectfully submit that the application as amended is in condition for allowance. Notice of such allowance is respectfully solicited.

In the event there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

Please charge any shortage of fees or credit any overpayment thereof to BLANK ROME LLP, Deposit Account No. 23-2185 (115354-00106). In the event that an extension of time is required to render the present Amendment timely and a separate Petition for an Extension of Time either does not accompany this Response or is insufficient to render this Amendment timely, the Applicants herewith petition under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized above.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Edmondson', is written over a horizontal line. The signature is stylized with a large loop at the end.

By: \_\_\_\_\_  
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